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REMARKS

Claims 1-29 were pending in the subject application. In the Office Action dated October 15, 2001 ("Office Action"), Claims 9, 11-13, and 17-29 are withdrawn from consideration, and Claims 1, 4, 6-8, 10/1, and 14-16 were rejected. In the amendment set forth above, Claims 1-7 and 10 are amended, Claim 8 is canceled, Claims 14-16 remain unchanged, and Claims 30-34 are newly presented. Based on the amendments to the Claims and the arguments set forth below, it is respectfully requested that all pending Claims are in condition for allowance, and an Early Notice of Allowance is requested in this case.

Arguments

1. Formal drawings will be filed upon receiving a Notice of Allowance in the subject case.
2. Applicants' Representative will correct any errors in the Specification as such errors become apparent.
3. The first application in the list of related cases issued September 12, 2000, as U.S. Pat. 6,119,042. The present status for all applications listed in the Specification is provided in the amendment to the Specification set forth above.
4. Applicants' Representative acknowledges the election requirement in the subject case, which has been made FINAL, and Claims 9, 11-13, and 17-29 stand withdrawn from further consideration.
5. Claim 8 was objected to under 37 CFR 1.75 as being a duplicate of Claim 4. Claim 8 has been canceled, and this objection should be withdrawn.

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6. Claim 7 was rejected under 35 USC §101 for claiming the same invention (i.e., as being co-extensive in scope) as that of Claim 1 of U.S. Patent No. 6,061,598 and Claim 1 of U.S. Patent No., 6,119,042. This rejection is respectfully traversed.

It is respectfully submitted that Claim 7 is not co-extensive in scope with Claim 1 of the '598 patent since Claim 1 of the '598 patent includes a stranded conductor that is *insulated from the coiled conductor between the first and second locations*. (Claim 1 of the '598 patent, lines 10-12, emphasis added.) This limitation is absent from Claim 7 of the current application, and the two Claims are therefore not co-extensive in scope. For at least this reason, the double-patenting rejection involving the '598 patent is improper and should be withdrawn.

Similarly, it is respectfully submitted that Claim 7 is not co-extensive in scope with Claim 1 of the '042 patent since Claim 1 of the '042 patent includes the limitation wherein the stranded conductor passes *between coils of the coiled conductor, to pass from within the internal lumen of the coiled conductor to outside of the coiled conductor*. * (Claim 1 of the '042 patent, lines 8-11, emphasis added.) This limitation is absent from Claim 7 of the current application, and the two Claims are therefore not co-extensive in scope. For at least this reason, the double-patenting rejection involving the '042 patent is improper and should be withdrawn.

7. Claims 1, 4, 6, 8, and 10/1 are rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 3,474,791 to Bentov ("Bentov"). This rejection is respectfully traversed.

Prior to considering the claims, a brief summary of Bentov and Applicants' invention is set forth for discussion purposes. The lead of Bentov includes a conductive core member 17 that is surrounded by an insulative sheath 18. A plurality of electrically conductive cables 25 and 26 are then wound helically about the sheath. (Bentov column 2 lines 57-62, and Figure 3.) These cables surrounding the sheath may be seven-stranded cables, for example. (Bentov column 2 lines 66-68.) Similar cable structures are described in Applicants' Specification. (Applicants' Specification page 5 lines 11-14.) In contrast to the helically wound cables described in Bentov, Applicants' claimed invention includes a coil structure as is clearly described in Applicants' Specification and

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shown in Figures 2 -19. The coil, which may take the form of a multi-conductor coil as is known in the art, is not structurally similar to a helically wound cable such as the cables shown in Bentov, or those described in Applicants' Specification. (Applicants' Specification page 5 lines 11-14.)

The distinction between a helically-wound cable as described in Bentov and a true "coil" is clearly understood by those skilled in the art. A cable of the type shown and described in Bentov generally includes one or more strands packed within a bundle. (Bentov column 2 lines 66-68.) Generally, these strands are twisted about a longitudinal axis. This type of cable configuration is illustrated by the core structure 17 of Bentov Figure 5. In contrast to a cable configuration, a coil includes one or more filars that are wrapped to define a lumen, as illustrated in Applicants' Figures 2-19. The walls of the coil are generally understood to be a single filar deep.

Applicants' use of a coil construction provides many important benefits as compared to the helically-wound cable construction of Bentov, as follows:

a.) Applicants' coil defines a lumen that can be utilized by a stylet. (See Applicants' Specification page 4 lines 17-19.) This is not the case with the coiled cable disclosed in Bentov.

b.) Applicants' coil design may generally be employed within a smaller diameter lead body, since the coil wall is generally only one filar deep. In contrast, the helically wound cable of Bentov is multiple filars deep.

c.) A true coil design as utilized in Applicants' system is very resilient, exhibiting the ability to stretch and compress without fracturing. In contrast, a multi-filar cable design of Bentov such as shown in Figure 4 is very susceptible to stress when wound in a helical manner. This is because the filars of the cable, are generally twisted about a longitudinal axis, and have therefore already undergone a stress force that may be intolerably exaggerated when the cable is further wound in a helical manner about a structure such as the core/sheath combination of Bentov.

For at least the foregoing reasons, Applicants' design provides a superior lead as compared to the Bentov mechanism.

Turning now to a discussion of the language of the Claims, Claim 1 includes an "elongated coiled conductor". The term "coiled conductor" as used in Claim 1 is clearly

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described in Applicants' Specification and Drawings to refer to a conventional coil as is known in the art and discussed above. (Applicants' Specification page 5 lines 14-16, and Figures 2-19.) Such a coil construction has the advantages set forth above as compared to a helically-wound cable construction disclosed in Bentov.

Although the term "coiled conductor" as used in Claim 1 is believed to be clearly defined in Applicants' Specification and Drawings, Claim 1 has been amended to even further clarify the use of a coil structure. More specifically, the term "coiled conductor" has been replaced with the term "conductor coil". This usage of "conductor coil" is supported by Applicants' Specification, which uses this term interchangeably with the term "coiled conductor". (See, for example, Applicants' Specification, page 9 line 15, which refers to the coil 116 of Figures 2-14.) Both interchangeable terms are defined in reference to Applicants' embodiments illustrated in Figure 1-19, all of which clearly illustrate a coil design.

In view of the foregoing amendment to Claim 1, it is respectfully submitted that Bentov does not anticipate Claim 1 because Bentov does not teach each and every element of Claim 1. Therefore, this rejection should be withdrawn.

It may further be noted that the helically-wound cables discussed in Bentov do not render Applicants' invention of Claim 1 obvious. This is true for at least the reason that a conventional coil such as employed in Applicants' design could not readily be adapted for use within the design of Bentov. For example, a conventional single- or multi-conductor coil generally defines a single lumen having a substantially uniform diameter. Such a coil is not easily modified to surround a sheath having a first diameter, and further electrically couple to an inner core member having a second diameter smaller than the first, as required by the Bentov structure. To be more specific, the ends of a convention coil cannot be readily adapted to wind around inner core 17 in the manner that is in any way similar to that shown in Bentov Figure 3. To utilize a coil structure in the configuration of Bentov, some mechanism would be required to couple the conductors of a multi-conductor coil to inner core 17. This would most likely entail a time-consuming manual process that would result in an electrode prone to failure, and that would render coil usage impractical.

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Another problem associated with using a coil within the Bentov electrode relates to insertion of the core/sheath combination into the inner lumen of a coil. More specifically, a pre-manufactured coil having a lumen with a predetermined diameter could not readily be used to construct the Bentov electrode because the core/sheath structure would be difficult, if not impossible, to insert into the coil lumen assuming any type of a press-fit is to be achieved. Any usage of a coil to form an electrode similar to that disclosed in Bentov would appear to entail winding the coil over the core/sheath structure *after* the sheath 18 was positioned over core 17. This type of a serial manufacturing process is not practical, and would make the cost of the electrode prohibitively expensive.

For at least the foregoing reasons, one skilled in the art would not be motivated to adapt a coil structure for use within the electrode structure of Bentov, and Bentov does not render Applicants' invention of Claim 1 obvious. For this additional reason, Claim 1 is patentable over Bentov, and this rejection should be withdrawn.

8. Claims 4, 6, 8, and 10/1 all depend either directly or indirectly from Claim 1, include additional aspects of Applicants' invention not taught by Bentov, and are not anticipated by Bentov for at least the reasons discussed above in reference to Claim 1. The rejection of these Claims is therefore improper, and should be withdrawn.

9. Claims 14-16 were rejected under 35 USC §103(a) as being unpatentable over Bentov in view of U.S. Patent No. 4,559,951 to Dahl et al. This rejection is respectfully traversed.

Claims 14-16 depend from Claim 1, and are allowable over this rejection for at least the reasons discussed above in reference to Claim 1. Moreover, Dahl adds nothing to teach or suggest the manner in which a coil may be adapted for use with the electrode configuration of Bentov. For at least the reasons discussed above in regards to Claim 1, these Claims are allowable over the current rejection, which should be withdrawn.

10. Claims 2-3, 5, and 10/2 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicants'

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Representative appreciatively acknowledges this indication of allowable subject matter in these Claims. Claim 5 has been re-written in independent format as new Claim 30, and dependent Claims 31-32 have been newly-presented to depend from Claim 30 to describe various scopes and aspects of Applicants' invention. Claim 2 has been presented in independent format as Claim 33, and dependent Claim 34 has been newly-presented to depend from Claim 33, and to describe the aspects of Applicants' invention claimed in Claim 10/2.

Formerly-presented Claims 2-3, 5, and 10/2 remain pending and are allowable in view of the amendments to the Claims and the arguments set forth above with respect to Claim 1.

Conclusion

Claims 1-29 were pending in the subject application. In the Office Action dated October 15, 2001 ("Office Action"), Claims 9, 11-13, and 17-29 are withdrawn from consideration, and Claims 1,4,6-8, 10/1, and 14-16 were rejected. In the amendment set forth above, Claims 1-7 and 10 are amended, Claim 8 is canceled, Claims 14-16 remain unchanged, and Claims 30-34 are newly presented. Based on the amendments to the Claims and the arguments set forth above, it is respectfully requested that all pending Claims are in condition for allowance, and an Early Notice of Allowance is respectfully requested in this case.

Respectfully submitted,

VERNESS ET AL.
By their attorneys,

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Date

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